Women in Leadership Positions Within Obstetrics and Gynecology

Does the Past Explain the Present?

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OBJECTIVE: To determine whether the proportion of leadership positions in obstetrics and gynecology held by women is consistent with expectations based on the proportion of women entering residency at the time of current leaders.

METHODS: Leadership positions were considered as department chairs affiliated with the Council of University Chairs of Obstetrics and Gynecology, editors of the 20 obstetrics and gynecology journals with the highest impact factors, and presidents of influential professional societies. Publically available data were accessed to determine gender and the year of medical school graduation for each individual holding each leadership position, as well as to determine the number of men and women entering residency in obstetrics and gynecology per year. Actual and expected proportions of leadership positions held by women were compared using \( \chi^2 \) tests.

RESULTS: Women should hold 71 of the total 194 leadership positions based on the proportion of women entering residency during the mean graduation year among leaders. Women actually hold 41 of these leadership positions (21.1%; \( P < .001 \)). Considering only leaders who graduated during the years in which residency matching data were available, women should hold 28 of these 74 leadership positions. Women actually hold 20 of the leadership positions from this subset (27.0%; \( P = .05 \)).

CONCLUSION: Women are underrepresented in leadership positions in obstetrics and gynecology, and this cannot be explained by historical gender imbalances among physicians entering our specialty.

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LEVEL OF EVIDENCE: III

In 2011, more than 80% of all obstetrics and gynecology residents and fellows were women. A recent editorial in Obstetrics & Gynecology stated that “within 10 years, our members and our leaders will be mostly women.” However, as recently as 2005, only 15% of academic department chair positions were held by women.

Recent attention has been devoted to the discrepancy between the expected and the actual numbers of women in leadership positions within business and government. Our leadership within obstetrics and gynecology remains male-dominated. Whether this reflects demographics of medical school graduates from the generation that now occupies leadership positions— or whether this represents other phenomena—is unclear.

The objective of this study was to determine whether the proportion of leadership positions in obstetrics and gynecology that are held by women reflects the proportion of women who entered our field at the same time as current field leaders.

MATERIALS AND METHODS

This study was reviewed and given a research waiver by the Tufts Health Sciences Institutional Review Board. Three types of leadership positions within obstetrics and gynecology were considered: department chairs at academic institutions associated with the Council of University Chairs of Obstetrics and Gynecology (CUCOG); editors of the 20 obstetrics and gynecology journals with the highest impact factors; and presidents of influential professional societies. The names of academic medical centers affiliated with CUCOG were obtained through
administrative staff at CUCOG (personal communication on July 10, 2012). Publicly available data were accessed—academic department, journal, and professional society web sites—to determine the name and gender of the individuals holding these leadership positions. State medical license databases were searched to obtain the year of graduation from medical school for each leader. If this information was not available—several states and Canada do not provide year of graduation on public registries—department web site information was searched. If the year of graduation could not be determined through the department web site, physician rating web sites (such as healthgrades.com) were searched. Physicians not based in the United States and nonphysician leaders were searched using the same strategy. All searches were conducted between July 9 and August 31, 2012.

The proportion of leadership positions that would be expected to be occupied by women based purely on gender distribution was determined using a publically available database from the National Residency Matching Program, which lists the number of men and women entering obstetrics and gynecology residency for the years 1977 through 1984. The actual proportion of leadership positions held by women was then calculated for each leadership category and for total leadership positions. Actual proportions were then compared with expected proportions of leadership positions held by women based on the gender distribution of the mean year of graduation among leaders.

A subset analysis was conducted among the leaders for whom gender data were available during the year they would have entered residency (1977–1984). For this subset, the proportion of leadership positions held by women was calculated and compared with expected proportions for this cohort. Pearson’s $\chi^2$ testing was performed to determine statistical significance; all analyses were conducted using GraphPad and Statata12 software.

**RESULTS**

The gender of the current leader was determined for 194 of the total 196 leadership positions; two institutions affiliated with CUCOG no longer had active medical centers and, therefore, a leader could not be ascertained for these sites. Among these 194 leaders, year of graduation was determined for 183 (94.3%). Graduation year was obtained predominantly through state license databases (126/183; 68.9%). Department web sites were searched to obtain year of graduation for an additional 29 leaders (15.8%), and physician rating web sites provided information for an additional 28 leaders (15.3%).

Of the total 194 leaders, 12 are Canadian, all of whom are chairs at Canadian academic hospitals affiliated with CUCOG, and eight are European or Australian, all of whom are journal editors. Eight leaders are nonphysicians: seven have PhD degrees as their terminal degree (two chairs, four editors, and one professional society president) and one has a nurse practitioner degree (professional society president). Six department chairs are listed as interim chairs, two of whom are women.

The mean year of graduation for current leaders in obstetrics and gynecology is 1980 (standard deviation 7.9, range 1955–1995). In 1980, the proportion of residents entering obstetrics and gynecology residency who were women was 36.8% (333/904).

Leadership positions within obstetrics and gynecology are predominantly held by men (Table 1). Women should hold 71 of the total 194 leadership positions based on the 36.8% of physicians entering residency in 1980 who were women. Women actually hold 41 of these leadership positions (21.1%; $P < .001$). Of the total 155 active chair positions affiliated with CUCOG, 31 are held by women (compared with expected 57; $P < .001$). Several journals divide editorial responsibilities, for a total of 25 editors among the 20 most influential journals. Of these 25 editor positions, three are held by women (compared with expected nine; $P = .01$). Leaders of professional societies were equally distributed between men and women. Of the 14 societies evaluated, seven are led by women (compared with expected five; $P = .31$).

Seventy-four of the 194 leaders (38.1%) entered residency during the years from 1977 to 1984, for which gender information was available. Among this cohort, women should hold 28 of the 74 leadership positions based on 38.3% of entering residents who were women (Table 2). Women actually hold 20 of the leadership positions from this subset (27.0%; $P = .05$).

| Table 1. Expected and Actual Proportions of Leadership Positions Held by Women in Obstetrics and Gynecology: Total Leader Population Compared With 1980 Cohort Data |
|---------------------------------|-----------------|-----|
| Women in Leadership Positions   | n/N (%)         | P   |
| **Expected**                   |                 |     |
| Total leadership positions      | 333/904 (36.8)  |     |
| Department chairs               | 31/155 (20.0)   | <.001 |
| Journal editors                 | 3/25 (12.0)     | .01  |
| Professional society presidents | 7/14 (50.0)     | .31  |
| **Actual**                     |                 |     |
| Total leadership positions      | 41/194 (21.1)   | <.001 |
| Department chairs               | 31/155 (20.0)   | <.001 |
| Journal editors                 | 3/25 (12.0)     | .01  |
| Professional society presidents | 7/14 (50.0)     | .31  |
### DISCUSSION

Leadership positions should be held by women in proportion to the number of women entering our specialty, in the absence of other mitigating factors. In fact, the actual proportion of women holding leadership positions in obstetrics and gynecology is significantly less than what is expected. The reasons behind this discrepancy are unclear and likely multifactorial.

One possibility for this discrepancy is systematic gender discrimination. A leadership career in academic medicine depends on many letters of recommendation. Letters for female candidates are more likely to contain stereotypical feminine descriptors or references to the physical appearance of the candidate; subsequently, women are judged by evaluators as less competent. An academic career depends on research productivity, which is largely dependent on research grant funding. The National Institutes of Health has acknowledged a paucity of women awarded large research grants. Leaders in academic medicine typically publish extensively in the scientific literature and ascend to associate or full professorship before attaining their position of leadership. Journals are more likely to publish articles authored by men, and academic promotions committees have been shown to preferentially promote men instead of equally qualified women.

Another potential explanation is that women deliberately take themselves out of contention for leadership positions, perhaps because of the personal sacrifices that are often required to achieve these leadership positions. Although less than 30% of large National Institutes of Health research grants are awarded to women, women apply for these grants at less than one-third the rate of male applicants. Female physicians have more parental leaves disrupting the formative years of their career than male physicians; even in the most supportive of households, women typically spend more hours per week than men performing household and child care duties. The time and energy required to foster an academic career amid these competing pressures may discourage women with leadership potential from continuing on an academic career track.

Promisingly, the number of female department chairs has increased from 15.2% to 20.0% over the course of the past 7 years. Rayburn et al demonstrated that the proportion of female department chairs has been increasing in an exponential rather than linear fashion. As such, the prediction that “within 10 years...our leaders will be mostly women” may be realized.

Strengths of this study include the reliability of the data accessed, including medical licensing board and National Residency Matching Program databases. In addition, gender and graduation year data were obtained for the majority of leaders, leading to statistically robust conclusions. One limitation of this study is the exclusion of department chairs not affiliated with CUCOG or exclusion of individuals holding other leadership positions such as division chairs or associate editors. In addition, the selection of professional societies included as most influential was subjective and other societies arguably could have been included.

When all members of our profession achieve their full career potential, we as a specialty benefit by having the greatest breadth of talent from which to select our leaders. Women’s health research benefits from the broadest array of creativity and intelligence driving our research initiatives. Systematic changes to optimize career development ideally would affect all physicians, allowing realization of career and life goals regardless of leadership positions attained.

The influences that limit the full potential of our workforce should be identified and addressed. Onsite child care, flexible work schedules, and mentoring programs with senior role models already have been identified as key initiatives to increase the number of women in leadership positions. More than three quarters of hospital employees are women, yet fewer than 20% of hospitals have affordable child care available on site. Increasing the prevalence of child care within our hospitals may help to increase the number of

<table>
<thead>
<tr>
<th>Year</th>
<th>Men</th>
<th>Women</th>
<th>%</th>
<th>Men</th>
<th>Women</th>
<th>%</th>
</tr>
</thead>
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<td>1977</td>
<td>425</td>
<td>182</td>
<td>30.0</td>
<td>10</td>
<td>2</td>
<td>16.7</td>
</tr>
<tr>
<td>1978</td>
<td>549</td>
<td>242</td>
<td>30.6</td>
<td>6</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>1979</td>
<td>538</td>
<td>257</td>
<td>37.8</td>
<td>3</td>
<td>3</td>
<td>50.0</td>
</tr>
<tr>
<td>1980</td>
<td>571</td>
<td>333</td>
<td>36.8</td>
<td>7</td>
<td>3</td>
<td>30.0</td>
</tr>
<tr>
<td>1981</td>
<td>559</td>
<td>359</td>
<td>39.1</td>
<td>9</td>
<td>2</td>
<td>18.2</td>
</tr>
<tr>
<td>1982</td>
<td>574</td>
<td>381</td>
<td>39.9</td>
<td>6</td>
<td>5</td>
<td>45.5</td>
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<td>1983</td>
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<td>397</td>
<td>34.7</td>
<td>9</td>
<td>3</td>
<td>25.0</td>
</tr>
<tr>
<td>1984</td>
<td>538</td>
<td>422</td>
<td>44.0</td>
<td>4</td>
<td>2</td>
<td>33.3</td>
</tr>
<tr>
<td>Total</td>
<td>4,266</td>
<td>2,643</td>
<td>38.3</td>
<td>54</td>
<td>20</td>
<td>27.0</td>
</tr>
</tbody>
</table>

women in leadership positions, not only within obstetrics and gynecology but also throughout healthcare.

Flexible work schedules have been identified as a strategy to balance professional and personal tasks more efficiently. Although the physical demands of our profession limit the ability to work from home, the emergence of electronic medical records and other supportive technologies such as speech recognition software may enable physicians to complete documentation or other administrative tasks remotely and conveniently. Academic departments should ensure that these technologies are available to faculty to maximize both clinical and personal efficiency. Out-of-town travel is associated with additional stress for professionals and their families. Professional societies should consider offering onsite child care or “Kids Club” daycare at medical conferences, similar to the guest programs that are often available to entertain spouses or other adult guests.

Faculty development programs including regular mentorship with experienced role models have been shown to benefit junior faculty traditionally underrepresented in academia. Similarly, research mentorship programs have helped junior faculty receive independent research funding and have decreased rates of researcher attrition from academia. Structured programs of career development for junior faculty—regardless of gender—that encompass research support and both career and work-life mentorship should be considered as the standard among academic medical centers rather than the exception.

As obstetrician–gynecologists, we advocate for the optimal physical, emotional, and social health of women. We must now turn diagnostic attention toward ourselves to better understand and rectify our leadership disparity.

REFERENCES